THE FUTURE OF MAINFRAME COMPUTING AND THE IMPORTANCE OF BUILDING MAINFRAME TALENT:

An Interview With UNICOM CEO Corry Hong

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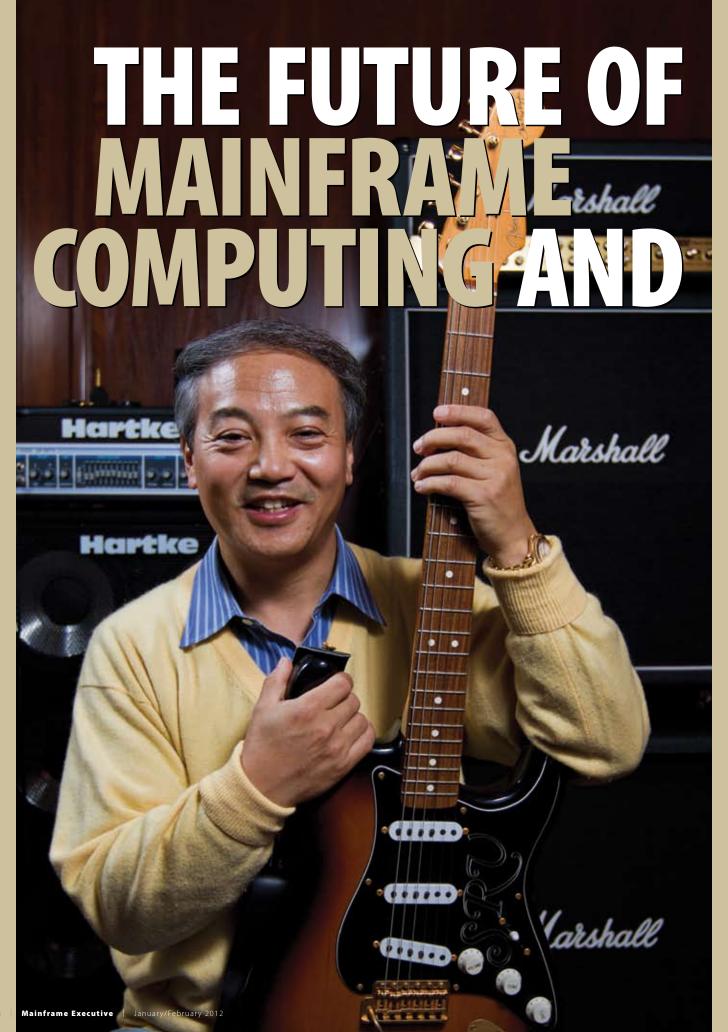
By Mary E. Shacklett

AN INTERVIEW WITH UNICOM CEO CORRY HONG

R ecently, *Mainframe Executive* visited with Corry Hong, founder and CEO of UNICOM Systems, Inc., a global information technology company providing software, hardware, professional services, and outsourcing services for zEnterprise and other computing platforms. UNICOM's extensive client portfolio includes Fortune 500 and Global 2000 companies that use its end-to-end solution suites in data centers on six continents. Hong founded the company 30 years ago, and continues to lead UNICOM in its unparalleled mission to grow and integrate technologies and solutions.

MAINFRAME EXECUTIVE: How did you get started in the IT industry? What are some of the organizations you worked with before founding your own company, and what's important to you as a technology contributor?

CORRY HONG: When I was a teenager, I played lead guitar in a hard rock band in Korea. I composed classical and modern orchestral scores before I turned my attention to designing software. Then when I was 20, I came to California and studied computer science at Pierce College in Los Angeles.

When IBM announced its popular IBM 43xx CICS-based mainframe computers, it sparked my interest. I had an affinity toward writing CICS code. In 1979, my first job was as a CICS/VSE programmer at Certified Life Insurance Co. in Los Angeles. Then I worked for Jacobs Engineering as a VM/VSE systems programmer, and later joined Transamerica as a senior >

CICS/MVS systems programmer, writing systems code and user exits. Later, I was retained by Candle Corp., as an OMEGAMON/CICS software developer. In addition to the software development projects I assisted with at Candle, I also continued writing and testing my own artificial intelligence mainframe software. After a year, I left Candle to devote all my energies to my new project which became AUTOMON—my first software product and to this day, the flagship software product of UNICOM.

My musical background was helpful because I found the process required to compose orchestral arrangements to be similar to the process required to design complex, subsystem software operating under multi-platform servers. There's an inherent natural order in both sophisticated musical arrangements and well-written computer software. The more complicated the problem, the more challenging it is to come up with the complete solution. Often the best answer is the most straightforward and the simplest!

ME: What made you decide to start UNICOM in 1981, and how has it grown since then in terms of the solutions it delivers, the size of your client base, and the number of offices you have?

HONG: At Transamerica, I was a senior CICS/MVS systems programmer in charge of the national Medicare systems running multiple CICS/VS R1V5 systems under MVS/XA systems. My first day at work, I had more than 20 system dumps and critical situations such as system crashes, storage violations, loops, VTAM/NCP buffer pool overloads, and performance degradation problems. Within days, I started writing my own Assembler programs to replace some faulty IBM management modules to prevent storage violations, system crashes, and loop conditions. I remember reading dumps, setting traps, and writing new code without eating or sleeping for one to two days at a time. Within six months, the Medicare systems became stable and highly available CICS systems. These programs became the engines for AUTOMON/CICS and UCCF/Server, the first software products of UNICOM. Through this experience at Transamerica, I realized the solutions I came up with to complex problems had general appeal to the mainframe community at large, and I decided to turn these valuable solutions into software available to all mainframe shops. UNICOM was that answer.

Since 1981, UNICOM has grown both organically and by acquiring multi-platform, strategic systems software assets. Today, the UNICOM Group has 18 corporate entities with offices in Los Angeles, Dallas, New Jersey, New Hampshire, Germany, the U.K., France, Italy, Spain, Benelux, and Switzerland, providing technology, financing, M&A, business services, and outsourcing services to Fortune 500 and Global 2000 companies worldwide.

ME: How have IT issues, challenges, and expectations of your clients changed between 1981 and today?

HONG: People who have only recently been introduced to software and systems have no idea how far we've come from the early days of punch cards to compile programs, hand mounting scratch tapes, noisy spooling printers, manual batch production job processing on an overnight shift, and even the bulky IBM 3278 green-screen display terminals.

In the '80s, IT was no more than a back-office utility consisting of legacy applications that processed assets for our customers. But today, IT assets are widely used as business integration frameworks. By way of example, Linda Dillman, the former CIO of the world's largest retailer, Wal-Mart, catalyzed the Radio Frequency Identification [RFID] certification movement by mandating the use of "bulk-reading-enabled RFID" by the company's top suppliers. This revolutionary move made it possible for Wal-Mart to cost-effectively serve more than 200 million customers per week at more than 9,600 retail units under 69 different brands in 28 countries. RFID is the radio wave technology to transfer data from an electronic tag, called an RFID tag or label, attached to an object, through a wireless reader for the purpose of identifying and tracking the object. The application of bulk reading enables an almost-parallel reading of tags.
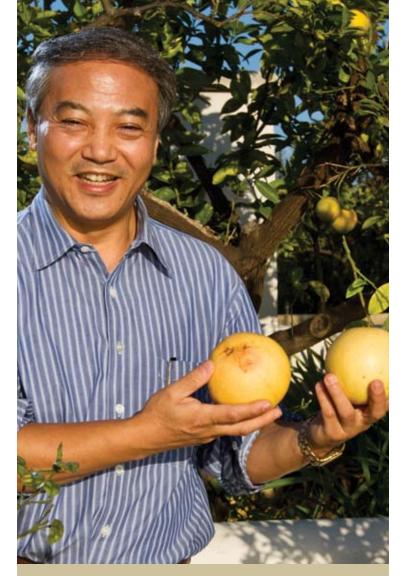
Likewise, Steve Randich, CIO, after joining Citigroup from NASDAQ, instigated the globalization of banking and financial services by transforming the bank's IT infrastructure. Prior to Randich, Citigroup had operations in more than 130 countries, and each country had autonomy to create fragmented IT systems. Randich's implementation of a global software-based IT asset alignment initiative transformed Citigroup into the world's leading banking and financial services organization. Because of this simplification, Citigroup's business is much more agile and able to roll out new products and platforms much easier and faster.

The point is that today, IT assets are no longer used simply as automated methods to process a large volume of commercial data. A recent IBM Global CEO study indicated that 85 percent of CEOs plan to collaborate to capitalize on global opportunities in the coming years. Software-centric IT assets are utilized by some CEOs to globalize their core business units, deploy single-to-any logical business delivery protocols, define strategic M&A frameworks, and effectuate the post-acquisition integration master plan to achieve corporate objectives. Agility and simplification in an age of complexity—that's the world today.

ME: What issues, challenges, and expectations are the same with clients today as they were in 1981? In short, how have you survived more than 30 years as a business owner in this industry?

HONG: I always thought that owning a successful technology company providing IT solutions is like a first-rate marriage between the company and its customers—a life-time journey charting unknown waters while discovering strength, endurance, commitment, dedication, sacrifice, and happiness. Some of our early customers are still calling me directly to discuss technical matters, and I cherish that.

In the classical Eastern culture, knowledge is conceived somewhat differently. Organization isn't a permanent structure to be discovered behind a changing process, but a per-

"We had the devastating Sage wildfire in Temecula, CA, several years ago that destroyed all the vegetation. Since then, we've planted in excess of 50,000 plants and trees as our effort to help heal the land. I have an extreme sense of satisfaction every time I see them bear fruit or flowers. They will be here for our children's children. We are but stewards of the planet for future generations."

ceived intelligibility and continuity that can be mapped within the dynamic process itself. "Organization" and "reorganization" are mutually shaping and being shaped, and exist as a dynamic calculus of contrasting form emerging in tension with each other. The revered military treatise by Sun Tzu, *The Art of War*, is not only the most widely studied military classic in human history, it has also guided business strategy among corporate executives, financial analysts, and M&A acquisition strategists. While there are many principles from Master Sun that are essential in business integration execution, one stands out: "Victory can be anticipated, but it cannot be forced." Master Sun goes on to say that: "He who knows the enemy and himself, will never in a hundred battles be at risk; He who does not know the enemy but knows himself, will sometimes win and sometimes lose; He who knows neither the enemy nor himself, will be at risk in every battle."

ME: You provide a broad array of products and services now for the mainframe, iSeries, and open systems markets. How are these markets, clients, and client needs different from each other? What percentage of your business is mainframe products and services?

HONG: Fifty percent of our business is from high-end mainframe servers, 30 percent comes from the midrange iSeries environment, and the remaining 20 percent is volume servers and open systems. There are many similarities in our clients' needs regardless of the specific market. Our customers need cost-effective IT operations and compelling ROI for their technology investments. They have a requirement to fully integrate services and software across their enterprise.

There's also the continued need for data security and compliance and the challenge of meeting these requirements in the face of a retiring skilled workforce. With the advent of hybrid infrastructures, different technologies are used in the same enterprise. However, in a number of organizations these technologies aren't yet integrated and are still siloed. We embrace the fact that heterogeneous environments are the norm today. For example, with the creation of our CICS.com affiliate as well as our cross-platform solutions, we can assist these customers in supporting very complex pre/post-integration infrastructures.

CICS.com Corp., a division of UNICOM, has access to 2,000 ISVs and 5,000 OEM vendors to provide onshore outsourcing services to Fortune 500 and Global 2000 customers worldwide. This is one example of where UNICOM is focused on preserving and extending the valuable knowledgebase of these workers and keeping this work in the U.S.

ME: For the mainframe, what are the main areas of needs and challenges your clients bring to you—and do you see this changing?

HONG: The principal challenge in the mainframe community is the need to train the next generation of mainframe programmers and support personnel. As the mainframe continues to be the most secure, powerful and efficient platform for the world's largest computing environments, we have the

technology, but we need the workforce to continue to carry on these capabilities. In order to meet this challenge, UNICOM, through CICS.com, has begun to network with universities and college computer science instructors to ensure that mainframe programming courses are introduced into the curriculum. Long term, UNICOM plans to develop and operate its own technical campus that would make mainframe training available to a new generation of programmers. We will offer the chance for experienced mainframers to develop a new breed of mainframe programmers and support workers, while taking advantage of the newest technologies in order to integrate with what the mainframe does best.
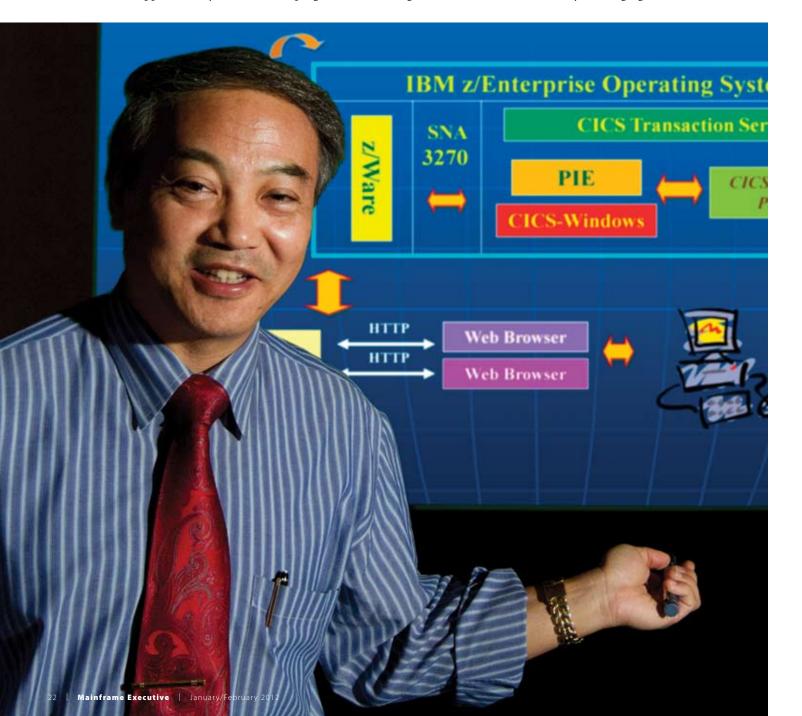
ME: The mainframe market is being hit by a skills shortage. How do organizations like yours help?

HONG: There are approximately 950,000 CICS programmers worldwide. Some 50,000 baby-boomer programmers may be considering retirement within the next three years. In addition to introducing mainframe training into computer science curriculum and supporting the training of a new generation of mainframe programmers, UNICOM is actively seeking to "re-deploy" some of the older mainframe technicians who may have left the industry due to the trend in offshore outsourcing.

ME: What is the impact of zEnterprise on the mainframe community? Do you see it changing clients' approaches to the mainframe or the types of work they will bring to you?

HONG: It's potentially a game-changer. The zEnterprise system certainly provides customers a solution for running the workloads for multi-platform applications which is becoming more the norm, so it definitely is changing our clients'

views of the mainframe. The zAAP [System z Application Assist Processor] specialty engine provides an attractively priced execution environment for new Web-based applications and SOA [Service-Oriented Architecture-]-based technologies, and benefits Java/XML programmers who desire the powerful integration advantages and traditional qualities of service of the IBM mainframe platform and cost-effective XML parsing services.

zEnterprise, or what IBM refers to as a "System of Systems," created a hardware and software infrastructure to manage multiple operating systems and servers in one physical structure. This makes physical as well as virtual consolidation a reality for the very first time. And when you include the mainframe, IBM is the only company in the world that offers server solutions across all disciplines, so only they could offer this approach. The industry at large has introduced so many new technologies and choices to our customers, and the downside is complexity. This is a bold step toward simplifying their real world. UNICOM supports this notion, and we're looking for the right ways to leverage our cross-platform systems management offerings to do exactly the same, supporting the zEnterprise's intention.

ME: Will cloud computing initiatives alter clients' technical work on the mainframe, and if so, in what ways?

HONG: Many of our clients tell us the mainframe is or will be a critical part of their cloud strategy. You can understand why since statistics show that 70 percent of the world's data resides on the z/OS mainframe and more than $1 trillion has been invested in mainframe applications. I've seen a trend over the last several years where organizations have consolidated their distributed workloads on the mainframe and have consolidated and virtualized their x86 servers using Linux on the mainframe, which is the basis of a private cloud. Interestingly, z/VSE may be an SMB [Small and Midsize Business] cloud server play here as well.

And now with the recent introduction of the zEnterprise 114 (z114), [with its entry price of $75,000 and the ability to consolidate up to 300 distributed servers, at a maximum of 130 capacity settings, from 26 to 3,110 MIPS in a single footprint, with up to 10 configurable cores, and CPs, IFLs, zIIPs, zAAPs and ICFs running at 3.8 GHz], SMB customers have a low-cost entry into this same technology, so we should see more server consolidation on the mainframe as well. This provides endless opportunities from a software developer perspective to assist our customers.

ME: What recommendations do you have for sites for getting the most out of their mainframe systems?

HONG: Select your strategic software vendor partners with care. Deploy the zEnterprise integration matrix by exploiting System z specialty engines such as IFL [Integrated Facility for Linux], zAAP, or zIIP [System z Integrated Information Processor] to maximize the client transaction processing workloads. Maximize your investment in zIIPs by enabling zAAP-eligible asynchronous transaction workloads to run on zIIPs.

The ease and economy of these zIIP data server engines help break down the walls between transactional data stores on the mainframe and applications that run on distributed systems. Workloads on zIIP can help connect, manage, extend, and protect the data and transactions that originate from the mainframe.

The zIIP capability on a zEnterprise mainframe helps minimize the need to maintain duplicate copies of the data and provides better security between the applications and the data. Thus, zIIP can help lower customers' total cost of computing.

ME: Is there anything you would like to add?

HONG: I'm privileged and honored to be in your magazine. As a young man growing up in Seoul, the decision to come to the U.S. and choose to study CICS programming was one of the best decisions I have ever made. I'm an American-dream-come-true story, and I feel blessed. I have three teenage sons, and I'm guiding them to learn mainframe programming.

As technology innovators and M&A integrators, UNICOM, IBM, HP, Apple, and the Fortune 500 companies, as well as other technology-based enterprises, are uniquely positioned to address and reverse the technology "brain drain" that's hindering our economy. For many years, the siren call of supposed cost-savings via outsourcing of high-tech positions overseas has disrupted the U.S. technology service sector with questionable benefits. At UNICOM, we recognize there are numerous highly skilled computer developers and technicians who have been laid off and forced into retirement in the pursuit of short-sighted cost savings. The net result of these practices is that the U.S.'s ability to compete globally and to continue to innovate and produce cutting-edge enterprise solutions has been compromised.

In fact, some companies that led the charge into outsourcing are beginning to re-think their decisions. Some, including GE, have changed course. GE, in fact, has begun to "re-insource" 1,100 American IT workers in Michigan. GE and others are beginning to discover what I have felt for some time: Efficiencies can't be measured solely in terms of reduced overhead. The benefits of having highly skilled, highly paid technicians in your core organization are much greater in the long run than the cost savings achieved by less expensive labor.

It's this continued belief that motivates UNICOM to actively recruit IT sector retirees to return to the workplace. In so doing, not only will our industry benefit from their years of experience, but they will be there to assist and mentor the next generation of IT innovators and American dreamers. ***ME***

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